## AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently Amended) A polysaccharide-protein conjugate or oligosaccharide-protein conjugate comprising an N-propionated polysaccharide or N-propionated oligosaccharide directly coupled to a protein through ~~at a~~ β-position sites of ~~a~~ one or more propionate ~~moiety~~ moieties of the N- propionated polysaccharide or N-propionated oligosaccharide; wherein the N-propionated polysaccharide or N-propionated oligosaccharide directly coupled to the protein ~~at the β-position of the propionate moiety~~ elicits protective antibodies reactive against the N-propionated polysaccharide or N-propionated oligosaccharide; wherein the N-propionated polysaccharide or N-propionated oligosaccharide is de-N-acetylated and N-acryloylated ~~at the de-N-acetylated terminus~~; wherein at least 50% of the N-propionated polysaccharide or oligosaccharide is de-N-acetylated; and wherein the protein is a bacterial protein or a synthetic protein containing lysine or cysteine residues.

2. (Cancelled)

3. (Previously Amended) The conjugates according to claim 1 wherein the saccharide is derived from a polysaccharide obtained from bacteria, yeast, cancer cells, or is chemically synthesized.

4. (Currently Amended) The conjugate ~~conjugates~~ according to claim 1 wherein the ~~the~~ polysaccharide or oligosaccharide is ~~derived from a polysaccharide~~ obtained from *Escherichia coli*, Meningococcus, Pneumococcus, Streptococcus, Neisseria, Salmonella, Klebsiella, or Pseudomonas.

5. (Previously Amended) The conjugates according to claim 1 wherein the saccharide is derived from a polysaccharide obtained from group B *Streptococcus* selected from the group consisting of type Ia, type Ib, type II, type III, type V, type VIII, and combinations thereof.

6-7. (Cancelled)

8. (Previously Amended) The conjugates according to claim 1 wherein the protein is selected from the group consisting of tetanus toxoid, diphtheria toxoid, a *Neisseria meningitidis* outer membrane protein, pneumolysoid, C- protein from group B *Streptococcus* and non-IgA-binding C-ß protein from group B *Streptococcus*.

9. (Previously Amended) The conjugates according to claim 8 wherein the protein is recombinantly produced.

10. (Previously Amended) The conjugates according to claim 9 wherein the protein is recombinant *N. meningitidis* outer membrane protein.

11. (Previously Amended) The conjugates according to claim 1 wherein the saccharide comprises a glycosaminoglycan.

12. (Previously Amended) The conjugates according to claim 1 wherein the saccharide comprises glycosyl residues of a structural repeating unit having at least one free amino group or N-acyl group.

13. (Previously Amended) The conjugates according to claim 12 wherein the glycosyl residue is selected from the group consisting of glucosamine, galactosamine, mannosamine, fucosamine and sialic acid.

14. (Previously Amended) The conjugates according to claim 1 wherein the N-propionated saccharide is directly coupled to an -free amino group of a lysine residue or a thiol group of a cysteine residue of the protein.

15. (Currently Amended) The conjugate ~~conjugates~~ according to claim 1 wherein the polysaccharide or oligosaccharide is ~~derived from a polysaccharide~~ obtained from group B *Streptococcus* type III, and wherein the protein is tetanus toxoid.

16. (Currently Amended) A polysaccharide-protein conjugate or oligosaccharide-protein conjugate comprising an N-propionated polysaccharide or N-propionated oligosaccharide directly coupled to a protein through β-position sites of one or more propionate moieties of the N-propionated polysaccharide or N-propionated oligosaccharide; wherein the conjugate ~~that~~ elicits protective antibodies reactive against the N-propionated polysaccharide or N-propionated oligosaccharide, wherein said conjugate is produced by a method comprising:

A) de-N-acetylating an isolated polysaccharide or oligosaccharide using a de-N-acetylating reagent to form a de-N-acetylated polysaccharide or a de-N-acetylated oligosaccharide, wherein at least 50% of the N-propionated polysaccharide or N-propionated oligosaccharide is de-N-acetylated;

B) N-acryloylating the de-N-acetylated polysaccharide or the de-N-acetylated oligosaccharide ~~at a de-N-acetylated terminus~~ with an acryloylating reagent to form an N-propionated polysaccharide or an N-propionated oligosaccharide, and

C) directly coupling ~~at a~~ through β-position sites of one or more ~~a~~ propionate ~~moiety~~ moieties of the N-propionated polysaccharide or the N-propionated oligosaccharide to a bacterial protein or a synthetic protein containing lysine or cysteine residues ~~protein~~ to form the polysaccharide-protein conjugate or the oligosaccharide-protein conjugate~~; wherein the protein is a bacterial protein or a synthetic protein containing lysine or cysteine residues~~.

17. (Currently Amended) The conjugate ~~conjugates~~ according to claim 16 wherein the polysaccharide or oligosaccharide is obtained from bacteria, yeast, or cancer cells or is chemically synthesized.

18. (Currently Amended) The conjugate ~~conjugates~~ according to claim 16 wherein the coupling is conducted at a pH of about 7.0,

19. (Currently Amended) The conjugate ~~conjugates~~ according to claim 16 wherein the coupling is conducted at a pH above 9.

20. (Currently Amended) The conjugate ~~conjugates~~ according to claim 16 wherein the coupling is conducted in a reagent selected from the group consisting of phosphate buffer, bicarbonate buffer, and borate buffer.

21. (Currently Amended) The conjugate ~~conjugates~~ according to claim 16 wherein the de-N-acetylating reagent is a base or an enzyme and the acryloylating reagent is selected from the group consisting of N-acryloyl chloride, acryloyl anhydride, acrylic acid and a dehydrating agent.

22. (Previously Amended) A pharmaceutical composition comprising the conjugates according to any one of claim 1 and claim 16 and a pharmaceutically acceptable carrier.

24. (Previously Amended) The pharmaceutical composition according to claim 23 wherein the adjuvant is selected from the group consisting of alum and stearyl tyrosine.

25. (Currently Amended) The pharmaceutical composition according to claim 22 further comprising a second immunogenic component, said second immunogenic component selected from the group of immunogens consisting of diphtheria-tetanus-pertussis (DTP), diphtheria-tetanus-acellular pertussis (DTaP), tetanus-diphtheria (Td), diphtheria-tetanus-acellular pertussis-*Haemophilus influenzae type B* (DTaP-Hib), diphtheria-tetanus-acellular pertussis-inactivated poliovirus-*Haemophilus influenzae type B* (DTaP-IPV-Hib), and combinations thereof.

26. (Previously Amended) An immunogen comprising the conjugates according to any one of claim 1 and claim 16, said immunogen elicits a polysaccharide-specific or an oligosaccharide-specific immune response.

27. (Original) The immunogen according to claim 26, wherein the immune response is generation of polysaccharide-specific or an oligosaccharide-specific immunoglobulin.

28. (Original) The immunogen according to claim 27 wherein the immunoglobulin is IgG, IgM, IgA or combinations thereof.

29-36. (Cancelled)

37. (Previously Amended) A vaccine comprising the conjugates according to any one of claim 1 and claim 16, wherein said vaccine provides protective immunity against at least one member of a genus of an organism from which the polysaccharide or oligosaccharide component of the polysaccharide-protein conjugate or oligosaccharide-protein conjugate was obtained.

38. (Previously Amended) The vaccine according to claim 37 wherein the organism is selected from the group consisting of bacteria and yeast.

39. (Previously Amended) The vaccine according to claim 38 wherein the bacteria is selected from the group consisting of *Escherichia coli*, Meningococcus, Pneumococcus, Streptococcus, Haemophilus, Neisseria, Salmonella, Klebsiella, and Pseudomonas.

40. (Previously Amended) The vaccine according to claim 37 further comprising a second immunogen in combination with the polysacharide-protein conjugate or oligosaccharide-protein conjugate, said second immunogen selected from the group consisting of DTP, DTaP, Td, DTaP, Hib, DTaP-IPV-Hib and combinations thereof.

41-58. (Cancelled)

59. (Currently Amended) The conjugate ~~conjugates~~ according to claim 1, wherein the de-N-acetylated polysaccharide~~s are~~ or de-N-acetylated oligosaccharide is at least 95% N-acryloylated.

60. (Currently Amended) The conjugate ~~conjugates~~ according to claim 16, wherein the de-N-acetylated polysaccharide or the de-N-acetylated oligosaccharide is at least 95% N-acryloylated.

61. (Currently Amended) The conjugate ~~conjugates~~ according to claim 1, wherein the N-propionated polysaccharide~~s are~~ or N-propionated oligosaccharide at least 50% de-N-acetylated.

62. (Cancelled)

63. (Currently Amended) The conjugate ~~conjugates~~ according to any one of claim 1 and claim 16, wherein the bacterial protein is selected from the group consisting of tetanus toxoid, diphtheria toxoid, cholera toxin subunit B, *Neisseria meningitidis* outer membrane proteins, pneumolysoid, C-β protein from group B Streptococcus, *Pseudomonas aeruginosa* toxoid, and pertussis toxoid.